

# Work Order ID: 89029

August-20-12 9:54:46 AM

\*89029\*

Rev ~~A~~ 5/3/05/20  
**PRELIMINARY ISSUE**

Page 1

Item ID: D3189-3

Accept

\*N900040100\*

Setup Start

\*NS1\*

Revision ID:

Stop

\*NS2\*

Item Name: Chafing Shield

Start Date: 20/08/2012 Start Qty: 3.00

\*3\*

Cust Item ID:

Required Date: 03/09/2012 Req'd Qty: 3.00

\*3\*

Customer:

Reference:

Approvals:

Process Plan: MLJ

Date: 12/08/20

Tooling:

Date:

Run Start

\*NR1\*

QC:

Date:

SPC (Y/N):

Date:

Stop

\*NR2\*

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
Draw Nbr	Revision Nbr								
D3189	Rev B <u>PU</u> <u>Q</u> <u>12/08/20</u>								
100	SHEAR	0.00							
*100*	Shear					3	0		Jm 12-8-20
Shear	Memo Cut to size as per Dwg D3189								
101	QC 2								
102	QC 8								
110	Small Fab	0.00							
*110*	Small Fab					3	0		Jm 12-8-20
Small Fab	Memo 1-Deburr & Grind Rads as per Dwg D3189								
Small Fab	2-Roll as per Dwg D3189								
120	QC5- Inspect part completeness to step on W/O	0.00							
*120*	QC					3			
Quality Control	Memo								

Rev ~~A~~ E

Cut on Water jet

Memo  
Cut to size as per Dwg D3189

DAS

16

2-8

to PC Day 4

12/08/20

+

+

+

+

+

+

+

+

+

+

+

+

+

+

+

SmB  
12-8-23

DAS  
16  
2-8  
to PC Day 4

3

Sp 12/08/21

NCR: Yes / No

**WORK ORDER NON-CONFORMANCE / UPDATE**

DQA: \_\_\_\_\_ Date: \_\_\_\_\_

QA Closed: \_\_\_\_\_ Date: \_\_\_\_\_

Work Order: _____  Part No. _____  NCR No. _____				<b>DISPOSITION</b>  Rework <input type="checkbox"/> Scrap <input type="checkbox"/> Use-as-is <input type="checkbox"/> Work Order Update <input type="checkbox"/>		<b>AGAINST DEPARTMENT/PROCESS</b>  <div style="display: flex; justify-content: space-between;"> <div>           Skid-tube <input type="checkbox"/>            Machining <input type="checkbox"/>            Thermoforming <input type="checkbox"/>            Large Fab <input type="checkbox"/> </div> <div>           Crosstube <input type="checkbox"/>            Small Fab <input type="checkbox"/>            Finishing <input type="checkbox"/>            Composite <input type="checkbox"/> </div> <div>           Water Jet <input type="checkbox"/>            Prod. Eng. Coord. <input type="checkbox"/>            Rec/Store/Packaging <input type="checkbox"/>            Supplier <input type="checkbox"/> </div> <div>           Engineering <input type="checkbox"/>            Quality <input type="checkbox"/>            Other <input type="checkbox"/> </div> </div>					
<b>Root Cause</b>	Date	Step	Qty	Description of work order update or Non-conformance	Initial Chief Eng	Action Description	Sign & Date	Verification	QC Inspector		
Doc/Data <input type="checkbox"/>											
Equip/Tooling <input type="checkbox"/>											
Operator <input type="checkbox"/>											
Material <input type="checkbox"/>											
Setup <input type="checkbox"/>											
Other <input type="checkbox"/>											
Process <input type="checkbox"/>											
Supplier <input type="checkbox"/>											
Training <input type="checkbox"/>											
Unapproved <input type="checkbox"/>											

FAULT CATEGORY									
<b>Landing Gear</b>			<b>General</b>						
<input type="checkbox"/>	Bending	<input type="checkbox"/>	Bend	<input type="checkbox"/>	Grain	<input type="checkbox"/>	Ovalized	<input type="checkbox"/>	Pressure/Forced
<input type="checkbox"/>	Centre Not Concentric to O/S	<input type="checkbox"/>	BOM/Route	<input type="checkbox"/>	Hardware	<input type="checkbox"/>	Over/Under tolerance	<input type="checkbox"/>	Temperature/Cure
<input type="checkbox"/>	Cracks	<input type="checkbox"/>	Broken/Damaged	<input type="checkbox"/>	Inspection Incomplete	<input type="checkbox"/>	Part Incorrect	<input type="checkbox"/>	Weld
<input type="checkbox"/>	Crushed/Crimped.	<input type="checkbox"/>	Burrs	<input type="checkbox"/>	Instructions Incomplete/Unclear	<input type="checkbox"/>	Part Lost/Missing	<input type="checkbox"/>	Wrong Stock Pulled
<input type="checkbox"/>	Cuffs	<input type="checkbox"/>	Contamination	<input type="checkbox"/>	Maintenance	<input type="checkbox"/>	Part Moved		
<input type="checkbox"/>	Heat Treat	<input type="checkbox"/>	Countersink	<input type="checkbox"/>	Mislabeled	<input type="checkbox"/>	Positioned Wrong		
<input type="checkbox"/>	Inspection Strip in Tube	<input type="checkbox"/>	Cut Too Short	<input type="checkbox"/>	Misread	<input type="checkbox"/>	Power Loss/Surge	<input type="checkbox"/>	Other
<input type="checkbox"/>	Ripples in Bend	<input type="checkbox"/>	Drill Holes	<input type="checkbox"/>	Offset				
<input type="checkbox"/>	Torque Waves in Extrusion	<input type="checkbox"/>	Drawing	<input type="checkbox"/>	Out of Calibration				
<input type="checkbox"/>	Turning Sequence	<input type="checkbox"/>	Finish	<input type="checkbox"/>	Out of Sequence				
<input type="checkbox"/>	Wave/Twist in Tube	<input type="checkbox"/>	Folio	<input type="checkbox"/>	Outside Dimensions				

# Work Order ID 89029

\*89029\*

Page 2

August-20-12 9:54:46 AM

Item ID: D3189-3

Accept

\*N900040100\*

Setup Start \*NS1\*

Revision ID:

Stop \*NS2\*

Item Name: Chafing Shield

Start Date: 20/08/2012 Start Qty: 3.00

\*3\*

Cust Item ID:

Required Date: 03/09/2012 Req'd Qty: 3.00

\*3\*

Customer:

Reference:

Approvals: Process Plan: \_\_\_\_\_ Date: \_\_\_\_\_ Tooling: \_\_\_\_\_ Date: \_\_\_\_\_

Run Start \*NR1\*

QC: \_\_\_\_\_ Date: \_\_\_\_\_ SPC (Y/N): \_\_\_\_\_ Date: \_\_\_\_\_

Stop \*NR2\*

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
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130

Identify as per dwg & Stock Location *LG* 0.00

\*130\*

Packaging

Memo

0.00

Packaging

*3X*

*SP*  
*13-5-30*

140

QC21- Final Inspection - Work Order Release 0.00

\*140\*

QC

Memo

0.00

Quality Control

*13/5/31*

*inspected as per*  
*Rev* *BS 23*  
*DAS 27*

POSITIVE RECALL

EFFECTIVE \_\_\_\_\_ AUTH \_\_\_\_\_

RELEASED *13/05/23* DATE *5*

*Rev*

*MF*  
*13-5-30*

NCR: Yes / No

**WORK ORDER NON-CONFORMANCE / UPDATE**

DQA: \_\_\_\_\_ Date: \_\_\_\_\_

QA Closed: \_\_\_\_\_ Date: \_\_\_\_\_

Work Order: _____  Part No. _____  NCR No. _____	<b>DISPOSITION</b>  Rework <input type="checkbox"/> Scrap <input type="checkbox"/> Use-as-is <input type="checkbox"/> Work Order Update <input type="checkbox"/>	<b>AGAINST DEPARTMENT/PROCESS</b>  <table style="width: 100%;"> <tr> <td>Skid-tube <input type="checkbox"/></td> <td>Crosstube <input type="checkbox"/></td> <td>Water Jet <input type="checkbox"/></td> <td>Engineering <input type="checkbox"/></td> </tr> <tr> <td>Machining <input type="checkbox"/></td> <td>Small Fab <input type="checkbox"/></td> <td>Prod. Eng. Coord. <input type="checkbox"/></td> <td>Quality <input type="checkbox"/></td> </tr> <tr> <td>Thermoforming <input type="checkbox"/></td> <td>Finishing <input type="checkbox"/></td> <td>Rec/Store/Packaging <input type="checkbox"/></td> <td>Other <input type="checkbox"/></td> </tr> <tr> <td>Large Fab <input type="checkbox"/></td> <td>Composite <input type="checkbox"/></td> <td>Supplier <input type="checkbox"/></td> <td></td> </tr> </table>	Skid-tube <input type="checkbox"/>	Crosstube <input type="checkbox"/>	Water Jet <input type="checkbox"/>	Engineering <input type="checkbox"/>	Machining <input type="checkbox"/>	Small Fab <input type="checkbox"/>	Prod. Eng. Coord. <input type="checkbox"/>	Quality <input type="checkbox"/>	Thermoforming <input type="checkbox"/>	Finishing <input type="checkbox"/>	Rec/Store/Packaging <input type="checkbox"/>	Other <input type="checkbox"/>	Large Fab <input type="checkbox"/>	Composite <input type="checkbox"/>	Supplier <input type="checkbox"/>	
Skid-tube <input type="checkbox"/>	Crosstube <input type="checkbox"/>	Water Jet <input type="checkbox"/>	Engineering <input type="checkbox"/>															
Machining <input type="checkbox"/>	Small Fab <input type="checkbox"/>	Prod. Eng. Coord. <input type="checkbox"/>	Quality <input type="checkbox"/>															
Thermoforming <input type="checkbox"/>	Finishing <input type="checkbox"/>	Rec/Store/Packaging <input type="checkbox"/>	Other <input type="checkbox"/>															
Large Fab <input type="checkbox"/>	Composite <input type="checkbox"/>	Supplier <input type="checkbox"/>																

Root Cause	Date	Step	Qty	Description of work order update or Non-conformance	Initial Chief Eng	Action Description	Sign & Date	Verification	QC Inspector
Doc/Data									
Equip/Tooling									
Operator									
Material									
Setup									
Other									
Process									
Supplier									
Training									
Unapproved									

**FAULT CATEGORY**

Landing Gear	General	Other
<input type="checkbox"/> Bending	<input type="checkbox"/> Bend	<input type="checkbox"/> Grain
<input type="checkbox"/> Centre Not Concentric to O/S	<input type="checkbox"/> BOM/Route	<input type="checkbox"/> Hardware
<input type="checkbox"/> Cracks	<input type="checkbox"/> Broken/Damaged	<input type="checkbox"/> Inspection Incomplete
<input type="checkbox"/> Crushed/Crimped	<input type="checkbox"/> Burrs	<input type="checkbox"/> Instructions Incomplete/Unclear
<input type="checkbox"/> Cuffs	<input type="checkbox"/> Contamination	<input type="checkbox"/> Maintenance
<input type="checkbox"/> Heat Treat	<input type="checkbox"/> Countersink	<input type="checkbox"/> Misabeled
<input type="checkbox"/> Inspection Strip in Tube	<input type="checkbox"/> Cut Too Short	<input type="checkbox"/> Misread
<input type="checkbox"/> Ripples in Bend	<input type="checkbox"/> Drill Holes	<input type="checkbox"/> Offset
<input type="checkbox"/> Torque Waves in Extrusion	<input type="checkbox"/> Drawing	<input type="checkbox"/> Out of Calibration
<input type="checkbox"/> Turning Sequence	<input type="checkbox"/> Finish	<input type="checkbox"/> Out of Sequence
<input type="checkbox"/> Wave/Twist in Tube	<input type="checkbox"/> Folio	<input type="checkbox"/> Outside Dimensions
		<input type="checkbox"/> Ovalized
		<input type="checkbox"/> Over/Under tolerance
		<input type="checkbox"/> Part Incorrect
		<input type="checkbox"/> Part Lost/Missing
		<input type="checkbox"/> Part Moved
		<input type="checkbox"/> Positioned Wrong
		<input type="checkbox"/> Power Loss/Surge
		<input type="checkbox"/> Pressure/Forced
		<input type="checkbox"/> Temperature/Cure
		<input type="checkbox"/> Weld
		<input type="checkbox"/> Wrong Stock Pulled
		<input type="checkbox"/> Other

# Picklist Print

August-20-12 9:54:50 AM

Page 1

Work Order ID: 89029

\*89029\*

Parent Item: D3189-3

\*D3189-3\*

Parent Item Name: Chafing Shield

Start Date: 20/08/2012

Required Date: 03/09/2012

Start Qty: 3.00

Required Qty: 3.00

Comments: IPP A07.04.04 new issue EC

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
---------------------------------	------------------------	---------------	-------------	---------------------	------------------	-----------------	--------------------	----------------	-------------	--------------	---------------	----------------	--------

M304S25GA

Purchased

No

100

sf

54.1000

0.21

~~0.663158~~

**\*M304S25GA\***

\*\*

1.0

Jm 12-8-20

304/316 .020" Sheet

Location

Loc Qty

Loc Code

MAT020

54.1

118228

54.1

118228

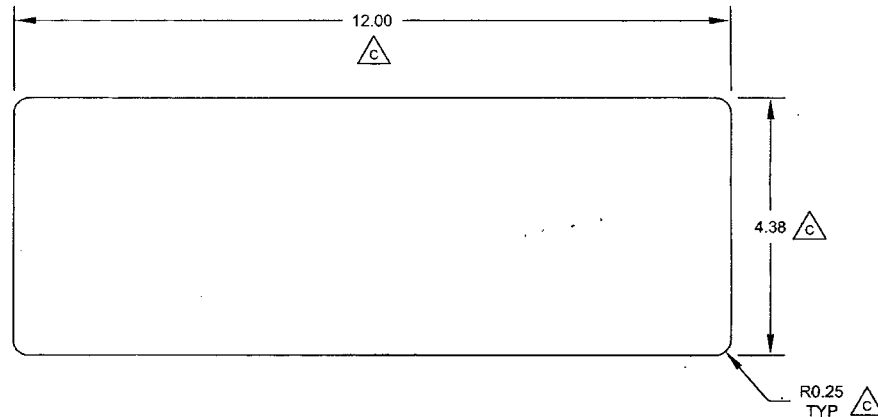
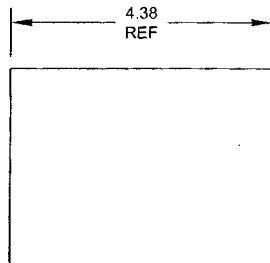
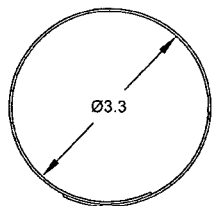
NCR: Yes / No

## WORK ORDER NON-CONFORMANCE / UPDATE

DQA: \_\_\_\_\_ Date: \_\_\_\_\_

QA Closed: \_\_\_\_\_ Date: \_\_\_\_\_

Work Order: _____  Part No. _____  NCR No. _____				<b>DISPOSITION</b>  Rework <input type="checkbox"/> Scrap <input type="checkbox"/> Use-as-is <input type="checkbox"/> Work Order Update <input type="checkbox"/>		<b>AGAINST DEPARTMENT/PROCESS</b>  <div style="display: flex; justify-content: space-between;"> <div>           Skid-tube <input type="checkbox"/>            Machining <input type="checkbox"/>            Thermoforming <input type="checkbox"/>            Large Fab <input type="checkbox"/> </div> <div>           Crosstube <input type="checkbox"/>            Small Fab <input type="checkbox"/>            Finishing <input type="checkbox"/>            Composite <input type="checkbox"/> </div> <div>           Water Jet <input type="checkbox"/>            Prod. Eng. Coord. <input type="checkbox"/>            Rec/Store/Packaging <input type="checkbox"/>            Supplier <input type="checkbox"/> </div> <div>           Engineering <input type="checkbox"/>            Quality <input type="checkbox"/>            Other <input type="checkbox"/> </div> </div>					
<b>Root Cause</b>	Date	Step	Qty	Description of work order update or Non-conformance	Initial Chief Eng	Action Description	Sign & Date	Verification	QC Inspector		
Doc/Data <input type="checkbox"/>											
Equip/Tooling <input type="checkbox"/>											
Operator <input type="checkbox"/>											
Material <input type="checkbox"/>											
Setup <input type="checkbox"/>											
Other <input type="checkbox"/>											
Process <input type="checkbox"/>											
Supplier <input type="checkbox"/>											
Training <input type="checkbox"/>											
Unapproved <input type="checkbox"/>											
<b>FAULT CATEGORY</b>											
<b>Landing Gear</b> <input type="checkbox"/> Bending <input type="checkbox"/> Centre Not Concentric to O/S <input type="checkbox"/> Cracks <input type="checkbox"/> Crushed/Crimped. <input type="checkbox"/> Cuffs <input type="checkbox"/> Heat Treat <input type="checkbox"/> Inspection Strip in Tube <input type="checkbox"/> Ripples in Bend <input type="checkbox"/> Torque Waves in Extrusion <input type="checkbox"/> Turning Sequence <input type="checkbox"/> Wave/Twist in Tube			<b>General</b> <input type="checkbox"/> Bend <input type="checkbox"/> BOM/Route <input type="checkbox"/> Broken/Damaged <input type="checkbox"/> Burrs <input type="checkbox"/> Contamination <input type="checkbox"/> Countersink <input type="checkbox"/> Cut Too Short <input type="checkbox"/> Drill Holes <input type="checkbox"/> Drawing <input type="checkbox"/> Finish <input type="checkbox"/> Folio			<input type="checkbox"/> Grain <input type="checkbox"/> Hardware <input type="checkbox"/> Inspection Incomplete <input type="checkbox"/> Instructions Incomplete/Unclear <input type="checkbox"/> Maintenance <input type="checkbox"/> Mislabeled <input type="checkbox"/> Misread <input type="checkbox"/> Offset <input type="checkbox"/> Out of Calibration <input type="checkbox"/> Out of Sequence <input type="checkbox"/> Outside Dimensions			<input type="checkbox"/> Ovalized <input type="checkbox"/> Over/Under tolerance <input type="checkbox"/> Part Incorrect <input type="checkbox"/> Part Lost/Missing <input type="checkbox"/> Part Moved <input type="checkbox"/> Positioned Wrong <input type="checkbox"/> Power Loss/Surge  <input type="checkbox"/> Pressure/Forced <input type="checkbox"/> Temperature/Cure <input type="checkbox"/> Weld <input type="checkbox"/> Wrong Stock Pulled  <input type="checkbox"/> Other		



**D3189-1 CHAFING SHIELD**  
(ROLL D3189-1F AS SHOWN)

**D3189-1F FLAT PATTERN**

SHOP COPY  
RETURN TO  
ENGINEERING  
UNCONTROLLED COPY  
SUBJECT TO AMENDMENT  
WITHOUT NOTICE  
WORK ORDER

NO. 89029 MJS

12/08/20

**NOTES:**

- 1) MATERIAL: AISI 304/316 SS 0.020" THICK (REF. DART SPEC M304S25GA)
- 2) FINISH: NONE
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
- 6) IDENTIFICATION: NONE
- 7) WEIGHT: 0.30 lbs

**PRELIMINARY ISSUE**

Rev PC1

12/14/20

PC1	-1/3 ENLARGED TO REDUCE CHANCE OF DMG TO CROSSTUBE, ALL FILLETS INCREASED TO R0.25	CP	12.08.14
B	ADD -3	CP	07.01.05
A	NEW ISSUE	CP	03.05.08
REV.	DESCRIPTION	BY	DATE
DESIGN	PC1		
DRAWN	PC1		
CHECKED			
MFG. APPR.			
APPROVED			
DE APPR.			
DATE	12.08.14		

**DART AEROSPACE LTD**  
HAWKESBURY, ONTARIO, CANADA

DRAWING NO. D3189  
TITLE CHAFING SHIELD  
SCALE NTS  
REV. 0  
SHEET 1 OF 2

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NCR: Yes / No

**WORK ORDER NON-CONFORMANCE / UPDATE**

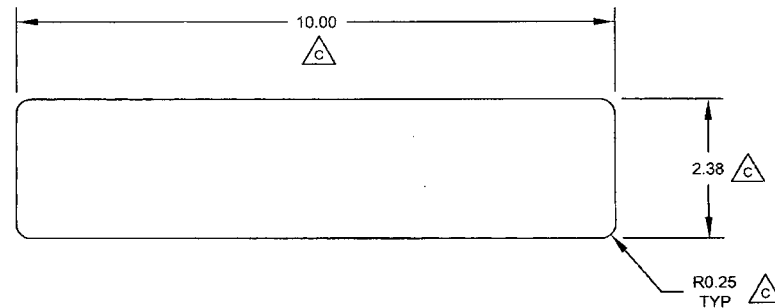
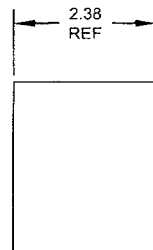
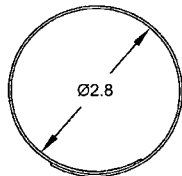
DQA: \_\_\_\_\_ Date: \_\_\_\_\_

QA Closed: \_\_\_\_\_ Date: \_\_\_\_\_

Work Order: _____  Part No. _____  NCR No. _____				<b>DISPOSITION</b>  Rework <input type="checkbox"/> Scrap <input type="checkbox"/> Use-as-is <input type="checkbox"/> Work Order Update <input type="checkbox"/>		<b>AGAINST DEPARTMENT/PROCESS</b>  <div style="display: flex; justify-content: space-between;"> <div>           Skid-tube <input type="checkbox"/>            Machining <input type="checkbox"/>            Thermoforming <input type="checkbox"/>            Large Fab <input type="checkbox"/> </div> <div>           Crosstube <input type="checkbox"/>            Small Fab <input type="checkbox"/>            Finishing <input type="checkbox"/>            Composite <input type="checkbox"/> </div> <div>           Water Jet <input type="checkbox"/>            Prod. Eng. Coord. <input type="checkbox"/>            Rec/Store/Packaging <input type="checkbox"/>            Supplier <input type="checkbox"/> </div> <div>           Engineering <input type="checkbox"/>            Quality <input type="checkbox"/>            Other <input type="checkbox"/> </div> </div>					
<b>Root Cause</b>	Date	Step	Qty	Description of work order update or Non-conformance	Initial Chief Eng	Action Description	Sign & Date	Verification	QC Inspector		
Doc/Data <input type="checkbox"/>											
Equip/Tooling <input type="checkbox"/>											
Operator <input type="checkbox"/>											
Material <input type="checkbox"/>											
Setup <input type="checkbox"/>											
Other <input type="checkbox"/>											
Process <input type="checkbox"/>											
Supplier <input type="checkbox"/>											
Training <input type="checkbox"/>											
Unapproved <input type="checkbox"/>											

FAULT CATEGORY				
<b>Landing Gear</b> <input type="checkbox"/> Bending <input type="checkbox"/> Centre Not Concentric to O/S <input type="checkbox"/> Cracks <input type="checkbox"/> Crushed/Crimped <input type="checkbox"/> Cuffs <input type="checkbox"/> Heat Treat <input type="checkbox"/> Inspection Strip in Tube <input type="checkbox"/> Ripples in Bend <input type="checkbox"/> Torque Waves in Extrusion <input type="checkbox"/> Turning Sequence <input type="checkbox"/> Wave/Twist in Tube	<b>General</b> <input type="checkbox"/> Bend <input type="checkbox"/> BOM/Route <input type="checkbox"/> Broken/Damaged <input type="checkbox"/> Burrs <input type="checkbox"/> Contamination <input type="checkbox"/> Countersink <input type="checkbox"/> Cut Too Short <input type="checkbox"/> Drill Holes <input type="checkbox"/> Drawing <input type="checkbox"/> Finish <input type="checkbox"/> Folio	<input type="checkbox"/> Grain <input type="checkbox"/> Hardware <input type="checkbox"/> Inspection Incomplete <input type="checkbox"/> Instructions Incomplete/Unclear <input type="checkbox"/> Maintenance <input type="checkbox"/> Mislabeled <input type="checkbox"/> Misread <input type="checkbox"/> Offset <input type="checkbox"/> Out of Calibration <input type="checkbox"/> Out of Sequence <input type="checkbox"/> Outside Dimensions	<input type="checkbox"/> Ovalized <input type="checkbox"/> Over/Under tolerance <input type="checkbox"/> Part Incorrect <input type="checkbox"/> Part Lost/Missing <input type="checkbox"/> Part Moved <input type="checkbox"/> Positioned Wrong <input type="checkbox"/> Power Loss/Surge  <input type="checkbox"/> Pressure/Forced <input type="checkbox"/> Temperature/Cure <input type="checkbox"/> Weld <input type="checkbox"/> Wrong Stock Pulled  <input type="checkbox"/> Other	





D3189-3F FLAT PATTERN

D3189-3 CHAFING SHIELD  
(ROLL D3189-3F AS SHOWN)

**NOTES:**

- 1) MATERIAL: AISI 304/316 SS 0.020" THICK (REF. DART SPEC M304S25GA)
- 2) FINISH: NONE
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
- 6) IDENTIFICATION: NONE
- 7) WEIGHT: 0.13 lbs

**PRELIMINARY ISSUE**

Rev. PC1

12/9/20

DESIGN	Q	<b>DART AEROSPACE LTD</b>	
DRAWN	Q	HAWKESBURY, ONTARIO, CANADA	
CHECKED		DRAWING NO.	REV. Q
MFG. APPR.		D3189	SHEET 2 OF 2
APPROVED		TITLE	SCALE
DE APPR.		CHAFING SHIELD	NTS
DATE	12.08.14	<small>COPYRIGHT © 2003 BY DART AEROSPACE LTD THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR REPRODUCED IN ANY MANNER WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD.</small>	

89029

NCR: Yes / No

**WORK ORDER NON-CONFORMANCE / UPDATE**

DQA: \_\_\_\_\_ Date: \_\_\_\_\_

QA Closed: \_\_\_\_\_ Date: \_\_\_\_\_

Work Order: _____  Part No. _____  NCR No. _____				<b>DISPOSITION</b>  Rework <input type="checkbox"/> Scrap <input type="checkbox"/> Use-as-is <input type="checkbox"/> Work Order Update <input type="checkbox"/>		<b>AGAINST DEPARTMENT/PROCESS</b>  <div style="display: flex; justify-content: space-between;"> <div>           Skid-tube <input type="checkbox"/>            Machining <input type="checkbox"/>            Thermoforming <input type="checkbox"/>            Large Fab <input type="checkbox"/> </div> <div>           Crosstube <input type="checkbox"/>            Small Fab <input type="checkbox"/>            Finishing <input type="checkbox"/>            Composite <input type="checkbox"/> </div> <div>           Water Jet <input type="checkbox"/>            Prod. Eng. Coord. <input type="checkbox"/>            Rec/Store/Packaging <input type="checkbox"/>            Supplier <input type="checkbox"/> </div> <div>           Engineering <input type="checkbox"/>            Quality <input type="checkbox"/>            Other <input type="checkbox"/> </div> </div>						
<b>Root Cause</b>		Date	Step	Qty	Description of work order update or Non-conformance	Initial Chief Eng	Action Description	Sign & Date	Verification	QC Inspector		
Doc/Data	<input type="checkbox"/>											
Equip/Tooling	<input type="checkbox"/>											
Operator	<input type="checkbox"/>											
Material	<input type="checkbox"/>											
Setup	<input type="checkbox"/>											
Other	<input type="checkbox"/>											
Process	<input type="checkbox"/>											
Supplier	<input type="checkbox"/>											
Training	<input type="checkbox"/>											
Unapproved	<input type="checkbox"/>											
<b>FAULT CATEGORY</b>												
<b>Landing Gear</b> <input type="checkbox"/> Bending <input type="checkbox"/> Centre Not Concentric to O/S <input type="checkbox"/> Cracks <input type="checkbox"/> Crushed/Crimped. <input type="checkbox"/> Cuffs <input type="checkbox"/> Heat Treat <input type="checkbox"/> Inspection Strip in Tube <input type="checkbox"/> Ripples in Bend <input type="checkbox"/> Torque Waves in Extrusion <input type="checkbox"/> Turning Sequence <input type="checkbox"/> Wave/Twist in Tube			<b>General</b> <input type="checkbox"/> Bend <input type="checkbox"/> BOM/Route <input type="checkbox"/> Broken/Damaged <input type="checkbox"/> Burrs <input type="checkbox"/> Contamination <input type="checkbox"/> Countersink <input type="checkbox"/> Cut Too Short <input type="checkbox"/> Drill Holes <input type="checkbox"/> Drawing <input type="checkbox"/> Finish <input type="checkbox"/> Folio			<input type="checkbox"/> Grain <input type="checkbox"/> Hardware <input type="checkbox"/> Inspection Incomplete <input type="checkbox"/> Instructions Incomplete/Unclear <input type="checkbox"/> Maintenance <input type="checkbox"/> Mislabeled <input type="checkbox"/> Misread <input type="checkbox"/> Offset <input type="checkbox"/> Out of Calibration <input type="checkbox"/> Out of Sequence <input type="checkbox"/> Outside Dimensions			<input type="checkbox"/> Ovalized <input type="checkbox"/> Over/Under tolerance <input type="checkbox"/> Part Incorrect <input type="checkbox"/> Part Lost/Missing <input type="checkbox"/> Part Moved <input type="checkbox"/> Positioned Wrong <input type="checkbox"/> Power Loss/Surge		<input type="checkbox"/> Pressure/Forced <input type="checkbox"/> Temperature/Cure <input type="checkbox"/> Weld <input type="checkbox"/> Wrong Stock Pulled <input type="checkbox"/> Other	



# Receiving Report

Date: 11/7/06  
 Supplier: THYSCORP

Batch No: M11F228  
 Dart P/O: 14402

Packing Slip: Yes ☒ No ☐  
 Invoice: Yes ☐ No ☒  
 Receipt: Cash ☐ Cr ☒

Release Note Attached: Yes ☒ No ☐ N/A ☐  
 Waybill Attached: Yes ☐ No ☒ N/A ☐  
 Shipment Complete: Yes ☒ No ☐ N/A ☐  
 QC6 Inspection 11/07/08 N/A ☒  
 Work Order                      N/A ☐

## Discrepancies

Part Number	Description	Quantity Ordered	Quantity Received	Quantity Returned	Quantity Short	Comments

Initials of receiver (if shipment OK)                      Level 12

Production/Admin: 11/7/06  
 Date:                       
 Received/Costing:                       
 Initial:                     

Location

All amounts are calculated in domestic currency.

Purchase Order ID/ Curr Type	Line Nbr/ Insp Req	Project ID	Reference/ Description/ Cert Std	PO U/M / Stock U/M	Required Date Required Qty	Recv Date/ Recv Emp	Recv Qty (PO U/M)	Cost Per Unit/ Recv Value	Inspected Qty/ Rejected Qty (PO U/M)	MRB Qty/ MRB Reject Qty	Book Amt
VendorID/Vendor Name		VC-COP001	Thyssenkrupp Materials CA Ltd								
PO14402	1		M6061T6B0.500X24. f 000		7/5/2011	7/6/2011	2.5000	\$56.78	0.0000	0	\$141.95
CAD	No		6061-T6 BAR .500" f X 24.000" 118228		2.5000	DESJ02		\$141.95	0.0000	0	
	2		M304S25GA sf		7/5/2011	7/6/2011	120.0000	\$2.64	0.0000	0	\$316.50
	No		304/316 .020" Sheet sf 118228		120.0000	DESJ02		\$316.50	0.0000	0	
Total Received Quantity:											122.5000
Total Qty to Inspect (PO U/M):											0.0000
Total Reject Quantity:											0.0000
Total Receipt Value:											\$458.45
Total Balance Due Quantity:											0.0000

## I N V O I C E

No: PEC IV-569966

Date: 06Jul11

Due: 05Aug11

## Sold By:

THYSSENKRUPP MATERIALS NA  
2821 LANGSTAFF ROAD  
CONCORD, ONTARIO L4K 5C6  
Tel: 905 669 9444 Fax: 9057389033

## Remit to:

THYSSENKRUPP MATERIALS NA  
c/o T27540  
P.O. BOX 4275, POSTAL STATION 'A'  
TORONTO, ONTARIO M5W 5V8

## Sold To:

( 20115)  
DART AEROSPACE  
1270 ABERDEEN ST  
HAWKESBURY, ON K6A 1K7

## Shipped To: ( 1)

DART AEROSPACE  
1270 ABERDEEN ST  
HAWKESBURY, ON K6A 1K7

Shp Dt 06Jul11 Ord Dt 04Jul11  
Trm NET 30 DAYS/NET 30 JOURS  
Frt PREPAID  
Slp STAN IVERS (905-532-1350)

SO No ST-346868 B/L PEC 718824  
PO/Ref 14402  
Via VIM TRANSFER TR FOB CONCORD  
Pbl

1 ALUMINUM PLATE 6061-T651	1 PCS		35 LBS
.50" THICK X 24.0000" X 30.0000"			
MATERIAL	1 PCS @	141.9500 EA	141.95 ✓
ENERGY & CAP SURCHG		25.0000 LOT	25.00 cL

2 STAINLESS STEEL SHEET 304-2B	3 PCS		124 LBS
.0250 Nom X 48.0000" X 120.0000"			
MATERIAL	124 LBS @	2.5320 LBS	313.97 cL

Total Shipped: 4 PCS 159 LBS  
Interest will be charged at 1.5% per month or  
18% per year on overdue accounts.

## \*\*\* SALES DEPT. OFFICE HOURS \*\*\*

7:30 AM TO 5:00 PM - MONDAY TO FRIDAY

\*\*\*\* TEL. 800-926-2600 \*\*\*\*

## \*\*\* CUSTOMER PICK-UP HOURS \*\*\*

\*\*\* 9:00 AM TO 4:00 PM \*\*\*

\*\*\*PLEASE NOTE A \$25.00 ENERGY SURCHARGE WILL BE  
ADDED TO EVERY ORDER.\*\*\*

\*\*\*\*\*

\* WE STOCK STAINLESS STEEL!!!! \*

\* PLEASE LET US QUOTE YOUR NEXT REQUIREMENT \*

\*\*\*\*\*

# TPS/GST TVH/HST 140223934 RT0001  
# TVQ - QST 1017327981 TQ0001

*****					
Material	Processing	Freight	Other	Taxes	TOTAL DUE
455.92			25.00	62.52	543.44
*****					
Taxes: ONHSTS	62.52				

Page: 1 .... Last

Bill of Lading  
Ship From:  
THYSSENKRUPP MATERIALS NA  
2821 LANGSTAFF ROAD  
CONCORD, ONTARIO L4K 5C6  
Tel: 905 669 9444 Fax: 9057389033

No: PEC 718824  
Ship Date 05Jul11 at 15:51 From PFW  
Probill  
Via VIM TRANSFER TRUCK  
FOB CONCORD  
Frt PREPAID  
Route 0- 0 Manifest  
Vhcle Trailer  
Slp STAN IVERS (905-532-1350)  
Sold To: (20115)  
DART AEROSPACE  
1270 ABERDEEN ST  
HAWKESBURY, ON K6A 1K7

Ship To: (1)  
DART AEROSPACE  
1270 ABERDEEN ST  
HAWKESBURY, ON K6A 1K7  
Tel: 613-632-9577 Fax: 613-632-1053

B I L L O F L A D I N G

1) Our Order PEC-346868- 1 Your PO # 14402  
ALUMINUM PLATE 6061-T651  
.50" THICK X 24.0000" X 30.0000"

Heat Number Tag No  
22/03/062A0 210749

Quantity  
5.00 SFT

MTR'S  
PCS  
1

Wt LBS  
35

2) Our Order PEC-346868- 2 Your PO # 14402  
STAINLESS STEEL SHEET 304-2B  
.0250 Nom X 48.0000" X 120.0000"

Heat Number Tag No  
YU257156 210384

Quantity  
120.00 SFT

MTR'S  
PCS  
3

Wt LBS  
124

TOTAL: Tags 2 PCS 4 LBS 159

Heat Number  
22/03/062A0  
YU257156

\*\*\* Chemical Analysis \*\*\*

MILL TEST REPORTS, PACKING SLIPS ARE TO SENT  
WITH MATERIAL AND FAXED TO THE CUSTOMER PRIOR  
TO SHIPPING.

ATTN: CHANTAL/LINDA

\*\* ALL PACKING SLIPS MUST HAVE THE HEAT NUMBER \*\*  
\*\* REFERENCED ON IT \*\*

TOTAL (1,2) 1 PKG, 1 SKID GW. 231 LBS

\*CUSTOMER PICK-UP HRS AT THYSSENKRUPP MATERIALS NA

Page: 1 ....Continued

1 crate  
1 carton

TOUTES ERREURS ET/OU MARCHANDISES MANQUANTES DOIVENT ETRE  
RAPPORTEES IMMEDIATEMENT  
ERRORS OR SHORTAGE MUST BE REPORTED IMMEDIATELY  
RETOUR DE MARCHANDISES AVEC NOTRE NUMERO D'APPROBATION SEULEMENT  
MERCHANDISE MAY NOT BE RETURNED WITHOUT OUR APPROVAL NUMBER

SHIP FROM:  
THYSSENKRUPP MATERIALS NA  
2821 LANGSTAFF ROAD  
CONCORD, ONTARIO L4K 5C6  
Tel: 905 669 9444 Fax: 9057389033

Ship To: ( 1 )  
DART AEROSPACE

No: PEC 718824  
Ship Date 05Jul11 at 15:51 From PFW  
Probill  
Via VIM TRANSFER TRUCK  
FOB CONCORD  
Frt PREPAID  
Route 0- 0 Manifest  
Vhcle Trailer  
Slp STAN IVERS (905-532-1350)  
Sold To: ( 20115 )  
DART AEROSPACE

=====

B I L L O F L A D I N G

CONCORD, ONT.\* \*\*\* 9:00 AM TO 4:00 PM \*\*\*

\*\*\*\* TEL. 800-926-2600 \*\*\*\*

\*\*\*\*\*

\* WE STOCK STAINLESS STEEL \*

\* PLEASE LET US QUOTE YOUR NEXT REQUIREMENT \*

\*\*\*\*\*

\*\*\*PLEASE NOTE A \$25.00 ENERGY SURCHARGE WILL BE

ADDED TO EVERY ORDER.\*\*\*

Page: 2 ..... Last

TOUTES ERREURS ET/OU MARCHANDISES MANQUANTES DOIVENT ETRE  
RAPPORTEES IMMEDIATEMENT  
ERRORS OR SHORTAGE MUST BE REPORTED IMMEDIATELY  
RETOUR DE MARCHANDISES AVEC NOTRE NUMERO D'APPROBATION SEULEMENT  
MERCHANDISE MAY NOT BE RETURNED WITHOUT OUR APPROVA NUMBER



SHIP FROM:  
THYSSENKRUPP MATERIALS NA  
2821 LANGSTAFF ROAD  
CONCORD, ONTARIO L4K 5C6  
Tel: 905 669 9444 Fax: 9057389033

No: PEC 718824  
Ship Date 05Jul11 at 15:51 From PFW  
Probill  
Via VIM TRANSFER TRUCK  
FOB CONCORD  
Frt PREPAID  
Route 0-0 Manifest  
Vhcle Trailer  
Slp STAN IVERS (905-532-1350)  
Sold To: (20115)  
DART AEROSPACE

Ship To: (1)  
DART AEROSPACE

=====

B I L L O F L A D I N G  
CONCORD, ONT.\* \*\*\* 9:00 AM TO 4:00 PM \*\*\*  
\*\*\*\* TEL. 800-926-2600 \*\*\*\*  
\*\*\*\*\*  
\* WE STOCK STAINLESS STEEL \*  
\* PLEASE LET US QUOTE YOUR NEXT REQUIREMENT \*  
\*\*\*\*\*  
\*\*\*PLEASE NOTE A \$25.00 ENERGY SURCHARGE WILL BE  
ADDED TO EVERY ORDER.\*\*\*

Page: 2 .... Last

TOUTES ERREURS ET/OU MARCHANDISES MANQUANTES DOIVENT ETRE  
RAPPORTEES IMMEDIATEMENT  
ERRORS OR SHORTAGE MUST BE REPORTED IMMEDIATELY  
RETOUR DE MARCHANDISES AVEC NOTRE NUMERO D'APPROBATION SEULEMENT  
MERCHANDISE MAY NOT BE RETURNED WITHOUT OUR APPROVAL NUMBER

# THYSSENKRUPP MATERIALS NA

DART AEROSPACE

STAINLESS STEEL SHEET 304-2B  
0.250 Nom X 48.0000" X 120.0000"  
PART NO.

PO/Ref 14402

We certify that this is a true copy of the report  
furnished by the producer of the metal, or data  
resulting from tests made in approved labs.

Signed by:

## Certificate of Mill Test Results

BL PEC-718824-002

Sheet  
Pg 1/1



YIEH MAU CORP.

## MILL TEST CERTIFICATES

INVOICE NO. : F10M927-1  
COMMODITY : PRIME COLD ROLLED STAINLESS STEEL SHEET

SPECIFICATION : AISI 304 ASTM A240/A480 and ASME SA240/SA480  
CUSTOMER : OLBERT METAL SALES LIMITED

345, SHUN AN RD, LUCHU HSIANG  
KAOHSIUNG HSIEN TAIWAN R.O.C  
TEL: 07-6972885 FAX: 07-6973006  
CERTIFICATE NO: F10M927-1  
DATE OF ISSUE: 10/08/2010

LIBERTY METAL SALES LIMITED						DATE OF ISSUE: 10/08/2010													
SIZE	NO.	Weight (N.W.)		Heat No.	ID NO.	Physical Properties Tensile Test GL=50 mm					Chemical Composition (%)								
		KGS	LBS			Y.S. (N/mm <sup>2</sup> )	T.S. (N/mm <sup>2</sup> )	E.L. (%)	HKB	HV	C x100	Si x100	Mn x100	P x1000	S x1000	Ni x100	Cr x100	N x100	
304 2B PI																			
11GA X 48" X 120"	1	1,628	3,589	YU162009	96S61567C-11	313	654	53	87	179	4.6	52	119	37	3	806	1804	2.7	
11GA X 48" X 120"	1	1,628	3,589	YU162009	96S61567C-12	313	654	53	87	179	4.6	52	119	37	3	806	1804	2.7	
16GA X 48" X 96"	1	1,710	3,770	YU162515	98S60092B1-3	298	624	57	79	152	5.1	46	110	36	3	804	1820	2.7	
16GA X 48" X 120"	1	1,665	3,671	YU162159	96S62953A-2	292	617	60	79	151	5	53	127	33	9	805	1812	2.6	
18GA X 48" X 120"	1	1,350	2,976	YU257404	96S61403B-6	295	657	55	85	172	4.0	51	125	36	6	811	1830	2.9	
18GA X 48" X 120"	1	1,338	2,950	YU257404	96S61403B-7	295	657	55	85	172	4.0	51	125	36	6	811	1830	2.9	
20GA X 48" X 96"	1	1,334	2,941	YU162157	97S63036B-1	308	647	54	86	175	4	44	105	31	5	807	1822	3.4	
20GA X 48" X 120"	1	1,569	3,459	YU257562	96S62959BA-5	315	672	56	86	176	4.3	48	114	37	1	805	1825	3.4	
20GA X 48" X 120"	1	1,583	3,490	YU257562	96S62959BA-3	315	672	56	86	176	4.3	48	114	37	1	805	1825	3.4	
20GA X 60" X 120"	1	1,630	3,594	YU161329	95S55697B-2221	292	629	54	84	168	5.1	41	108	37	6	809	1818	2.5	
20GA X 60" X 120"	1	1,630	3,594	YU161329	95S55697B-2222	292	629	54	84	168	5.1	41	108	37	6	809	1818	2.5	
22GA X 48" X 96"	1	1,700	3,748	YU161154	96S55838A-2	291	639	55	85	170	4.3	49	122	37	4	806	1807	2.3	
22GA X 48" X 120"	1	1,652	3,642	YU161154	95S55838A-3	291	639	55	85	170	4.3	49	122	37	4	806	1807	2.3	
24GA X 48" X 120"	1	1,336	2,945	YU257156	95S59278B-1	281	616	54	86	176	1.6	37	144	34	9	801	1821	3.2	
24GA X 48" X 120"	1	1,336	2,945	YU257156	95S59278B-2	281	616	54	86	176	1.6	37	144	34	9	801	1821	3.2	
24GA X 48" X 120"	1	1,338	2,950	YU257156	95S59278B-3	281	616	54	86	176	1.6	37	144	34	9	801	1821	3.2	
304 NO.4 LASER																			
11GA X 48" X 96"	1	1,646	3,629	YU162009	96S61567B-111	313	654	53	87	179	4.6	52	119	37	3	806	1804	2.7	
11GA X 48" X 120"	1	1,631	3,596	YU162009	96S61567B-112	313	654	53	87	179	4.6	52	119	37	3	806	1804	2.7	
11GA X 48" X 120"	1	1,630	3,594	YU162009	96S61567B-113	313	654	53	87	179	4.6	52	119	37	3	806	1804	2.7	
16GA X 48" X 120"	1	1,690	3,726	YU162547	98S66094A-11	282	662	56	82	160	4.4	47	119	32	10	804	1817	2.5	
16GA X 48" X 120"	1	1,690	3,726	YU162547	98S66094A-12	262	602	56	82	160	4.4	47	119	32	10	804	1817	2.5	
22GA X 48" X 96"	1	1,746	3,849	YU161311	95S55839A-12	294	659	53	85	173	4.8	48	113	36	4	802	1822	2.4	
22GA X 48" X 120"	1	1,718	3,788	YU161311	95S55839A-13	294	659	53	85	173	4.8	48	113	36	4	802	1822	2.4	
24GA X 48" X 96"	1	1,604	3,536	YU162639	98S66747B-15	298	685	55	86	174	4.8	49	122	37	11	804	1820	1.6	
24GA X 48" X 120"	1	1,598	3,523	YU162639	98S66747B-14	209	685	55	86	174	4.8	49	122	37	11	804	1820	1.6	
TOTAL:	25	39,380	86,820																
Remarks: NO MERCURY CONTAMINATION																			

Remarks: NO MERCURY CONTAMINATION  
WE HEREBY CERTIFY THAT THE MATERIAL DESCRIBED HEREIN HAS  
BEEN MADE IN ACCORDANCE WITH THE RULES OF THE MILL CERTIFICATE

Beind test: good for all Heat NO.

YIEH MAU CORP.

*Lin Kun Hing*  
Manager of Quality Assurance Section



Dart Aerospace Ltd.  
1270 Aberdeen Street  
Hawkesbury, ON K6A 1K7  
Tel: 613 632 9577  
Fax: 613 632 1053

\*\*\*PO REPRINT\*\*\*

Purchase Order ID PO14402

Purchase Order Date 6/30/2011

PO Print Date 7/4/2011

Page Number 1 of 2

Order From :

VC-COP001

THYSSENKRUPP MATERIALS CA LTD  
O/A VPK METAL- C/O T27540/PO BOX 4275,POSTAL "A"  
TORONTO, ON M5W 5V8  
CA

Contact Name

Vendor Phone 905 669 9444

Vendor Fax 905 738 9033

Vendor Account Nbr

Buyer

Chantal Lavoie

Requisition Nbr

Tax Resale Nbr 10127-2607

Terms

Net 30

Currency

CAD

FOB

Destination-Collect

Ship To :

DART AEROSPACE LTD 1270 ABERDEEN  
HAWKESBURY, ON K6A 1K7  
CANADA

Line Nbr	Reference Revision ID Vendor Part Number	Description/ Mfg ID	Req Date/ Taxable	Req. Qty/ Unit of Measure	Ship Method	Unit Price	Extended Price
1	M6061T6B0.500X24.000	6061-T6 BAR .500" X 24.000"	7/5/2011 Yes	2.50 f	Yours ppd	\$56.7800	\$141.95
		Special Inst: MATERIAL: 6061-T6/T651/T6510/T6511/T62 ALUMINUM BAR AS PER QQ-A-225/8 OR AMS-QQ-A-225/8 OR AMS 4117/ 4128/4115/4116 OE QQ-A-200/8 OR AMS-QQ-A-200/8 OR AMS 4160 OR ASTM B211 OR ASTM B221  SIZE OF MATERIAL: .500" THICK X 24" WIDE X 30" LONG					
2	M304S25GA 600	304/316 .020" Sheet	7/5/2011 Yes	120.00 sf	Yours ppd	\$2.6375	\$316.50
		Special Inst: MATERIAL: 304/316 SS SHEET ANNEALED 2B FINISH AS PER MIL-S-5059 OR AMS 5513 (304) OR AMS 5524 (304) OR ASTM A240 OR ASME SA240					

7/4/2011



Dart Aerospace Ltd.  
1270 Aberdeen Street  
Hawkesbury, ON K6A 1K7  
Tel: 613 632 9577  
Fax: 613 632 1053

\*\*\*PO REPRINT\*\*\*

Purchase Order ID **PO14402**

Purchase Order Date 6/30/2011

PO Print Date 7/4/2011

Page Number 2 of 2

Order From :

VC-COP001

THYSSENKRUPP MATERIALS CA LTD  
O/A VPK METAL- C/O T27540/PO BOX 4275,POSTAL"A"  
TORONTO, ON M5W 5V8  
CA

Contact Name

Vendor Phone 905 669 9444

Vendor Fax 905 738 9033

Vendor Account Nbr

Buyer

Chantal Lavoie

Requisition Nbr

Tax Resale Nbr 10127-2607

Terms Net 30

Currency CAD

FOB Destination-Collect

PO Total:

\$458.45

MATERIAL CERTIFICATION  
REQ'D UPON DELIVERY

*CL*  
No substitution or deviation without  
consent.  
Certificate of Conformity or Material  
Certification required when applicable

Change Nbr: 3

Change Date: 7/4/2011



Dart Aerospace Ltd.  
1270 Aberdeen Street  
Hawkesbury, ON K6A 1K7  
Tel: 613 632 9577  
Fax: 613 632 1053

## PURCHASE ORDER

Purchase Order ID PO14402

Purchase Order Date 6/30/2011

PO Print Date 6/30/2011

Page Number 1 of 2

Order From :

VC-COP001

THYSSENKRUPP MATERIALS CA LTD  
O/A VPK METAL- C/O T27540/PO BOX 4275,POSTAL"A"  
TORONTO, ON M5W 5V8  
CA

Contact Name		Buyer	Chantal Lavoie
Vendor Phone	905 669 9444	Requisition Nbr	
Vendor Fax	905 738 9033	Tax Resale Nbr	10127-2607
Vendor Account Nbr		Terms	Net 30
		Currency	CAD
		FOB	Destination-Collect

Ship To : DART AEROSPACE LTD 1270 ABERDEEN  
HAWKESBURY, ON K6A 1K7  
CANADA

**FAKED**  
CL 11/06/13

Line Nbr	Reference Revision ID Vendor Part Number	Description/ Mfg ID	Req Date/ Taxable	Req Qty/ Unit of Measure	Ship Method	Unit Price	Extended Price
1	M6061T6B0.500X24.000	6061-T6 BAR .500" X 24.000"	7/5/2011 Yes	2.50 f	Yours ppd	\$56.7800	\$141.95
<b>Special Inst:</b> MATERIAL: 6061- T6/T651/T6510/T6511/T62 ALUMINUM BAR AS PER QQ-A-225/8 OR AMS-QQ-A-225/8 OR AMS 4117/ 4128/4115/4116 OE QQ-A-200/8 OR AMS- QQ-A-200/8 OR AMS 4160 OR ASTM B211 OR ASTM B221  * SIZE OF MATERIAL: .500" THICK X 24" * WIDE X 30" LONG							
2	M304S25GA	304/316 .020" Sheet	7/5/2011 Yes	96.00 sf	Yours ppd	\$2.5320	\$243.07
<b>Special Inst:</b> MATERIAL: 304/316 SS SHEET ANNEALED 2B FINISH AS PER MIL-S-5059 OR AMS 5513 (304) OR AMS 5524 (304) OR ASTM A240 OR ASME SA240							

No substitution or deviation without  
consent.  
Certificate of Conformity or Material  
Certification required when applicable

Change Nbr: 1

Change Date: 6/30/2011



Dart Aerospace Ltd.  
1270 Aberdeen Street  
Hawkesbury, ON K6A 1K7  
Tel: 613 632 9577  
Fax: 613 632 1053

## PURCHASE ORDER

Purchase Order ID **PO14402**

Purchase Order Date 6/30/2011

PO Print Date 6/30/2011

Page Number 2 of 2

**Order From :**

VC-COP001

THYSSENKRUPP MATERIALS CA LTD  
O/A VPK METAL- C/O T27540/PO BOX 4275,POSTAL"A"  
TORONTO, ON M5W 5V8  
CA

<b>Contact Name</b>		<b>Buyer</b>	Chantal Lavoie
<b>Vendor Phone</b>	905 669 9444	<b>Requisition Nbr</b>	
<b>Vendor Fax</b>	905 738 9033	<b>Tax Resale Nbr</b>	10127-2607
<b>Vendor Account Nbr</b>		<b>Terms</b>	Net 30
		<b>Currency</b>	CAD
		<b>FOB</b>	Destination-Collect

**PO Total:**

**\$385.02**

MATERIAL CERTIFICATION  
REQ'D UPON DELIVERY

U CL

No substitution or deviation without  
consent.  
Certificate of Conformity or Material  
Certification required when applicable

Change Nbr: 1

Change Date: 6/30/2011

Q U O T A T I O N

No: PEC ST-346540

Quoted By:  
 THYSSENKRUPP MATERIALS NA  
 2821 LANGSTAFF ROAD  
 CONCORD, ONTARIO L4K 5C6  
 Tel: 905 669 9444 Fax: 9057389033

Quoted To: ( 20115)  
 DART AEROSPACE  
 1270 ABERDEEN ST  
 HAWKESBURY, ON K6A 1K7

Quoted Ship To: ( 1)  
 DART AEROSPACE  
 1270 ABERDEEN ST  
 HAWKESBURY, ON K6A 1K7

Trm NET 30 DAYS/NET 30 JOURS Qtd 30Jun11 Qte Ref  
 Frt PREPAID Via FOB  
 Tel 613-632-9577 Fax 613-632-1053 Ctc CHANTAL  
 Slp STAN IVERS (905-532-1350)

Q U O T A T I O N

QT No: PEC ST-346540

Test Certs: Chem-Y Phys-Y 1 Original copies with Shipment, 1 with Invoice

1 ALUMINUM PLATE 6061-T651	1 PCS	38 LBS
.50" THICK X 24.0000" X 30.0000"		
<<<----- SPECIFICATIONS ----->>>		
Ga Tol + 0.0000 - 0.0000 Pc/Tag 1		
WthTol + 0.0630 - 0.0000 Wt/Skd		
LthTol + 0.0630 - 0.0000 Ty Pk		
MATERIAL	1 PCS @	141.9500 EA 141.95
ENERGY & CAP SURCHG		25.0000 LOT 25.00
-----		
2 STAINLESS STEEL SHEET 304-2B	3 PCS	125 LBS
.0250 Nom X 48.0000" X 120.0000"		
MATERIAL	125 LBS @	2.5320 LBS 316.50

MILL TEST REPORTS, PACKING SLIPS ARE TO SENT  
 WITH MATERIAL AND FAXED TO THE CUSTOMER PRIOR  
 TO SHIPPING.

ATTN: CHANTAL/LINDA

\*\* ALL PACKING SLIPS MUST HAVE THE HEAT NUMBER \*\*

\*\* REFERENCED ON IT \*\*

Price in effect at time of shipment.

Price based on receipt of total order.

All weights are theoretical.

All orders are subject to credit approval.

\*\*\*\* TEL. 800-926-2600 \*\*\*\*

\*\*\* CUSTOMER PICK-UP HOURS \*\*\*

\*\*\* 9:00 AM TO 4:00 PM \*\*\*

\*\*\*\*\*

\* WE STOCK STAINLESS STEEL!!!! \*

\* PLEASE LET US QUOTE YOUR NEXT REQUIREMENT \*

\*\*\*\*\*

\*\*\*PLEASE NOTE A \$25.00 ENERGY SURCHARGE WILL BE

ADDED TO EVERY ORDER.\*\*\*

Order Totals: 2 Items 163 LBS

*****	Material	Processing	Freight	Other	Taxes	ORDER AMT
	458.45			25.00	62.85	546.30

Page: 1 ....Continued

Q U O T A T I O N

No: PEC ST-346540

Quoted By:  
 THYSSENKRUPP MATERIALS NA  
 2821 LANGSTAFF ROAD  
 CONCORD, ONTARIO L4K 5C6  
 Tel: 905 669 9444 Fax: 9057389033

Quoted To: ( 20115)  
 DART AEROSPACE

Quoted Ship To: ( 1)  
 DART AEROSPACE

=====

Q U O T A T I O N		QT No: PEC ST-346540	
*****			
Taxes: ONHSTS	62.85	0.00	0.00



## Chantal Lavoie

---

**From:** Jean-Luc Menard <jmenard@dartaero.com>  
**Sent:** June 29, 2011 11:46 AM  
**To:** L Lacelle; Chantal Lavoie  
**Cc:** Harvey Siemens; Robert Fuentes  
**Subject:** D4424 MATERIAL

Linda/Chantal,

Just talked to Harvey, he thinks Eagle will be ordering 1x D4424-1 soon and they will require a quick turn around. Could you order the material pls so we are ready to manufacture when the p/o comes in.

M6061T6 SHEET 30" X 24" MIN is what we would need.

Thx

JLM

Y2"

**Jean-Luc Menard**

Production Engineering Coordinator



1270 Aberdeen Street  
Hawkesbury Ontario  
Canada K6A 1K7  
Tel: (613) 632-5200 Ext 227

[jmenard@dartaero.com](mailto:jmenard@dartaero.com)



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~~M6061T6 \$500~~

M6061T6 \$0.500 x 24.000

---

TRANSMISSION VERIFICATION REPORT

TIME : 06/30/2011 15:02  
NAME :  
FAX :  
TEL :  
SER.# : F9N212739

DATE, TIME	06/30 15:01
FAX NO./NAME	19057389033
DURATION	00:00:30
PAGE(S)	02
RESULT	OK
MODE	STANDARD ECM

04Jul11 08:42

## S A L E S   A C K N O W L E D G M E N T

No: PEC ST-346868

Sold By:  
 THYSSENKRUPP MATERIALS NA  
 2821 LANGSTAFF ROAD  
 CONCORD, ONTARIO L4K 5C6  
 Tel: 905 669 9444 Fax: 9057389033

Sold To: ( 20115)  
 DART AEROSPACE  
 1270 ABERDEEN ST  
 HAWKESBURY, ON K6A 1K7

Ship To: ( 1)  
 DART AEROSPACE  
 1270 ABERDEEN ST  
 HAWKESBURY, ON K6A 1K7

Trm NET 30 DAYS/NET 30 JOURS  
 Frt PREPAID  
 Con 96294  
 Slp STAN IVERS (905-532-1350)

Ord 04Jul11 Due05Jul11  
 Via VIM TRANSFER TRUCK FOB CONCORD  
 PO/Rel 14402  
 Tel 613-632-9577 Fax 613-632-1053

## S A L E S   A C K N O W L E D G M E N T

SO No PEC ST-346868

Test Certs: Chem Y Phys Y 1 Original copies with Shipment, 1 with Invoice

1 ALUMINUM PLATE 6061-T651	1 PCS	38 LBS
.50" THICK X 24.0000" X 30.0000"		
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WthTol + 0.0630 - 0.0000 Wt/Skd		
LthTol + 0.0630 - 0.0000 Ty Pk		
MATERIAL	1 PCS @	141.9500 EA
ENERGY & CAP SURCHG		25.0000 LOT
		141.95
		25.00
-----		
2 STAINLESS STEEL SHEET 304-2B	3 PCS	125 LBS
.0250 Nom X 48.0000" X 120.0000"		
MATERIAL	125 LBS @	2.5320 LBS
		316.50

MILL TEST REPORTS, PACKING SLIPS ARE TO SENT  
 WITH MATERIAL AND FAXED TO THE CUSTOMER PRIOR  
 TO SHIPPING.

ATTN: CHANTAL/LINDA

\*\* ALL PACKING SLIPS MUST HAVE THE HEAT NUMBER \*\*

\*\* REFERENCED ON IT \*\*

\*\* CUSTOMER PICK-UP HRS / 9:00 AM TO 4:00 PM \*\*

\*\*\* TEL. 800-926-2600 \*\*\*

\*\*\*\*\*

\* WE STOCK STAINLESS STEEL!!!! \*

\* PLEASE LET US QUOTE YOUR NEXT REQUIREMENT \*

\*\*\*\*\*

\*\*\*PLEASE NOTE A \$25.00 ENERGY SURCHARGE WILL BE  
 ADDED TO EVERY ORDER.\*\*\*

Order Totals: 2 Items 163 LBS

*****					
Material	Processing	Freight	Other	Taxes	ORDER AMT
458.45			25.00	62.85	546.30
*****					
Taxes: ONHSTS		62.85			

## Receiving Report

Date: 11/7/6  
 Supplier: THYSCORH

Batch No: M11P228  
 Dart P/O: 14402

Packing Slip: Yes ☒ No ☐  
 Invoice: Yes ☐ No ☒  
 Receipt: Cash ☐ Cr ☒

Release Note Attached: Yes ☒ No ☐ N/A ☐  
 Waybill Attached: Yes ☐ No ☒ N/A ☐  
 Shipment Complete: Yes ☒ No ☐ N/A ☐  
 QC6 Inspection ✓ 11/07/08 N/A ☒  
 Work Order                      N/A ☐

### Discrepancies

Part Number	Description	Quantity Ordered	Quantity Received	Quantity Returned	Quantity Short	Comments

Initials of receiver (if shipment OK) Level 12                     

Production/Admin: 11/7/08  
 Date                       
 Received/Costing                       
 Initial                     

Location

All amounts are calculated in domestic currency.

[illegible]





Dart Aerospace Ltd.  
1270 Aberdeen Street  
Hawkesbury, ON K6A 1K7  
Tel: 613 632 9577  
Fax: 613 632 1053

\*\*\*PO REPRINT\*\*\*

Purchase Order ID PO14402

Purchase Order Date 6/30/2011

PO Print Date 7/4/2011

Page Number 1 of 2

Order From :

VC-COP001

THYSSENKRUPP MATERIALS CA LTD  
O/A VPK METAL- C/O T27540/PO BOX 4275,POSTAL "A"  
TORONTO, ON M5W 5V8  
CA

Contact Name

Vendor Phone 905 669 9444

Vendor Fax 905 738 9033

Vendor Account Nbr

Buyer

Chantal Lavoie

Requisition Nbr

Tax Resale Nbr 10127-2607

Terms

Net 30

Currency

CAD

FOB

Destination-Collect

Ship To :

DART AEROSPACE LTD 1270 ABERDEEN  
HAWKESBURY, ON K6A 1K7  
CANADA

Line Nbr	Reference Revision ID Vendor Part Number	Description/ Mfg ID	Req Date/ Taxable	Req. Qty/ Unit of Measure	Ship Method	Unit Price	Extended Price
1	M6061T6B0.500X24.000	6061-T6 BAR .500" X 24.000"	7/5/2011 Yes	2.50 f	Yours ppd	\$56.7800	\$141.95
		Special Inst: MATERIAL: 6061-T6/T651/T6510/T6511/T62 ALUMINUM BAR AS PER QQ-A-225/8 OR AMS-QQ-A-225/8 OR AMS 4117/ 4128/4115/4116 OE QQ-A-200/8 OR AMS-QQ-A-200/8 OR AMS 4160 OR ASTM B211 OR ASTM B221  SIZE OF MATERIAL: .500" THICK X 24" WIDE X 30" LONG					
2	M304S25GA 600	304/316 .020" Sheet	7/5/2011 Yes	120.00 sf	Yours ppd	\$2.6375	\$316.50
		Special Inst: MATERIAL: 304/316 SS SHEET ANNEALED 2B FINISH AS PER MIL-S-5059 OR AMS 5513 (304) OR AMS 5524 (304) OR ASTM A240 OR ASME SA240					

7/4/2011



Dart Aerospace Ltd.  
1270 Aberdeen Street  
Hawkesbury, ON K6A 1K7  
Tel: 613 632 9577  
Fax: 613 632 1053

## PURCHASE ORDER

Purchase Order ID PO14402

Purchase Order Date 6/30/2011

PO Print Date 6/30/2011

Page Number 1 of 2

Order From :

VC-COP001

THYSSENKRUPP MATERIALS CA LTD  
O/A VPK METAL- C/O T27540/PO BOX 4275,POSTAL"A"  
TORONTO, ON M5W 5V8  
CA

Contact Name		Buyer	Chantal Lavoie
Vendor Phone	905 669 9444	Requisition Nbr	
Vendor Fax	905 738 9033	Tax Resale Nbr	10127-2607
Vendor Account Nbr		Terms	Net 30
		Currency	CAD
		FOB	Destination-Collect

Ship To : DART AEROSPACE LTD 1270 ABERDEEN  
HAWKESBURY, ON K6A 1K7  
CANADA

FAKED  
CLY/06/30

Line Nbr	Reference Revision ID Vendor Part Number	Description/ Mfg ID	Req Date/ Taxable	Req Qty/ Unit of Measure	Ship Method	Unit Price	Extended Price
1	M6061T6B0.500X24.000	6061-T6 BAR .500" X 24.000"	7/5/2011 Yes	2.50 f	Yours ppd	\$56.7800	\$141.95
<b>Special Inst:</b> MATERIAL: 6061- T6/T651/T6510/T6511/T62 ALUMINUM BAR AS PER QQ-A-225/8 OR AMS-QQ-A-225/8. OR AMS 4117/ 4128/4115/4116 OE QQ-A-200/8 OR AMS- QQ-A-200/8 OR AMS 4160 OR ASTM B211 OR ASTM B221  * SIZE OF MATERIAL: .500" THICK X 24" * WIDE X 30" LONG							
2	M304S25GA	304/316 .020" Sheet	7/5/2011 Yes	96.00 sf	Yours ppd	\$2.5320	\$243.07
<b>Special Inst:</b> MATERIAL: 304/316 SS SHEET ANNEALED 2B FINISH AS PER MIL-S-5059 OR AMS 5513 (304) OR AMS 5524 (304) OR ASTM A240 OR ASME SA240							

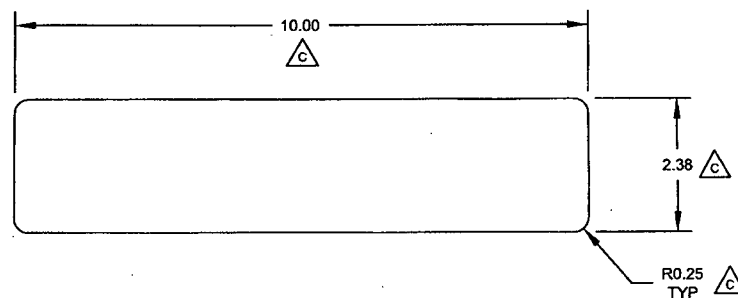
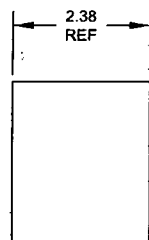
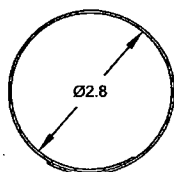
No substitution or deviation without  
consent.  
Certificate of Conformity or Material  
Certification required when applicable

Change Nbr: 1

Change Date: 6/30/2011







D3189-3F FLAT PATTERN

D3189-3 CHAFING SHIELD  
(ROLL D3189-3F AS SHOWN)

RELEASED  
2012-09-04  
JNP

**NOTES:**

- 1) MATERIAL: AISI 304/316 SS 0.020" THICK (REF. DART SPEC M304S25GA)
- 2) FINISH: NONE
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
- 6) IDENTIFICATION: NONE
- 7) WEIGHT: 0.13 lbs

DESIGN	90	<b>DART AEROSPACE LTD</b> HAWKESBURY, ONTARIO, CANADA	
DRAWN	100		
CHECKED	5	DRAWING NO.	REV. C
MFG. APPR.	11	D3189	SHEET 2 OF 2
APPROVED	11	TITLE	SCALE
DE APPR.	11	CHAFING SHIELD	NTS
DATE	12.08.14	<small>COPYRIGHT © 2003 BY DART AEROSPACE LTD THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD.</small>	